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THE RELATIONSHIP BETWEEN SPIRITUALITY AND THE USE OF SELF-

REGULATION STRATEGIES BY HOSPITALIZED ADULT ONCOLOGY PATIENTS

By

Captain Cassandra Renee Salvatore

USAF

Submitted in Partial Fulfillment of the

Requirements for the Degree of Master of Science

in the College of Nursing

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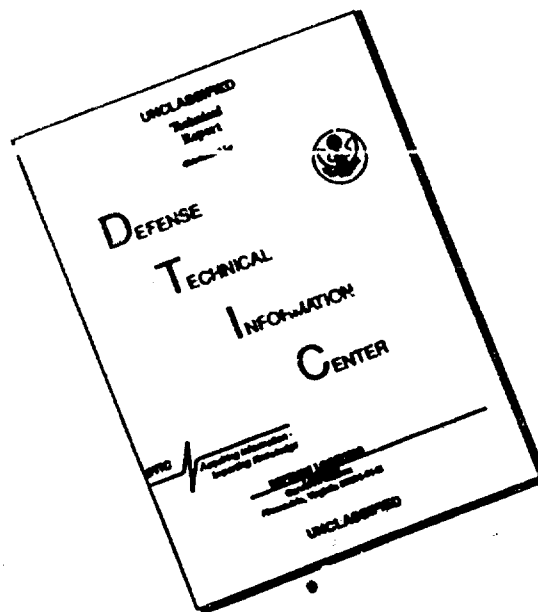UNCLASSIFIED

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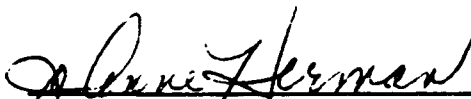REGULATION STRATEGIES BY HOSPITALIZED ADULT ONCOLOGY PATIENTS

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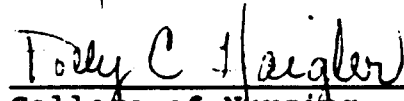
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ABSTRACT

The purpose of this descriptive-correlational study was to examine the relationship between spirituality and the use of self-regulation strategies (SRSs) by hospitalized adult oncology patients. SRSs are any behaviors that individuals perform to make themselves feel better. SRSs have been studied in relationship to decreasing the severity of cancer symptoms and its treatment. Researchers do not know why some studies yield insignificant results or why individuals choose certain SRSs over other SRSs. Spirituality has been suggested as a variable which may impact both the effectiveness of SRSs and the choice of SRSs. A self-regulation model provided the conceptual framework for this study. A convenience sample of 50 hospitalized adults with cancer completed two instruments and a demographic data sheet. Both the Carolina Self-Regulation Inventory-Revised and the Spirituality Perspective Scale have adequate reliability and validity. Research findings demonstrated that subjects had a high degree of spirituality. The most frequently used SRS was health care provider and the least used SRS was power. A relatively strong positive correlation (0.51 p = .0002) occurred between spirituality and SRSs. Subjects who were more spiritual used more SRSs than subjects who were less spiritual. Nurses who work with hospitalized adult oncology patients can use these results to increase the effectiveness of their treatment planning with SRSs.

TABLE OF CONTENTS

iii

LIST OF FIGURES

LIST OF TABLES

CHAPTER I

Introduction

Self-regulation, or man's attempt to consciously manage his or her own physiological and psychological health, can be dated back to antiquity with the use of meditation (Lichstein, 1988; Stoyva, 1977). Popular self-regulation strategies (SRSs) used today include meditation, relaxation, guided imagery, biofeedback, self-hypnosis, prayer, exercise, and distraction (Lichstein, 1988; Titlebaum, 1988; Stoyva, 1977; Vines, 1988; Wood & Pesut, 1981; Zahourek, 1988). However, any behavior an individual uses to consciously modify a health state can be termed a self-regulation strategy (Collier, 1990; Stoyva, 1977). Researchers who use SRSs indicate that these techniques are effective for decreasing the severity of a variety of patient problems such as anxiety, hypertension, pain, nausea and vomiting associated with chemotherapy, and weight loss associated with cancer and its treatment (Achterberg, Kenner, & Casey, 1989; Cotanch, 1983; Dixon, 1984; Lyles, Burish, Krozely, & Oldham, 1982; Pender, 1984; Pender, 1985). Most of the self-regulation studies involve teaching the patient a SRS, and then measuring its impact on a particular patient problem. For example, Pender (1984, 1985) taught progressive muscle relaxation to a group of hypertensive adults. The hypertensive group had significantly lower blood pressure readings and anxiety levels when compared to a control group of hypertensive adults who did not receive the treatment.

Most of the research utilizing self-regulation as a variable concentrates on chronic diseases and specific symptoms associated with the disease (Stoyva, 1977; Sutlerley, 1979). Cancer and symptom management have been extensively studied (Barber, 1978; Burish, Shartner & Lyles, 1981; Cangello, 1961; Carey & Burish, 1987; Cotanch, 1983; Moore & Altmaier, 1988; Wilkie, Lovejoy, Dodd, & Tesler, 1988; Winningham & MacVicar, 1988). For example, progressive muscle relaxation and guided imagery have been researched in association with decreasing anxiety, nausea, and vomiting associated with chemotherapy (Burish et al, 1981; Burish & Lyles, 1979; Carey & Burish, 1987; Lyles et al, 1982). Hypnosis has been reported as being successful in decreasing pain associated with cancer (Barber, 1978; Cangello, 1961). It has even been speculated that relaxation techniques can decrease the tumor burden associated with cancer by enhancing the user's immune response (Simonton, 1978).

There are two areas in self-regulation research that have had limited study. First, exploration of SRSs that clients already know and practice has focused primarily on diabetic patients, oncology patients, and post-surgical patients (Dodd, 1982; Hamera et al, 1988; O'Connell et al, 1984; Rhodes, Watson, & Hanson, 1988; Wilkie et al, 1988; Wood & Pesut, 1981). Identifying SRSs already utilized by clients provides important information on how clients are coping with their illness and/or symptoms. This research could also identify which SRSs are most utilized, which are

least utilized, and which SRSs are most effective in alleviating a particular patient problem (Hamera et al, 1988; Wilkie et al, 1988). Second, researchers have ignored personal factors such as age, gender, race, education level, and spirituality which may influence a client's selection and utilization of SRSs. Historically, researchers have selected a SRS, selected a population with a particular problem, and then conducted the research without regard to the client's personal factors. Selecting a SRS that is congruent with the client's personal factors can increase the probability that the intervention will be effective (Bulecheck & McCloskey, 1985; Gordon, 1987).

Statement of the Problem

Nurses by law and social obligation are given the right to diagnose and treat actual and potential health problems that are within their scope of practice (Nursing: A Social Policy Statement, 1980). Treatment involves the utilization of nursing interventions such as a SRS to decrease or alleviate the nursing diagnosis. Choosing a nursing intervention based on the diagnosis is just the first step in effective treatment planning. Next, the nurse should personalize the intervention to the client by assessing the client's personal factors. Interventions which are congruent with the client's personal factors increase the probability that the interventions will be successful (Bulecheck & McCloskey, 1987; Gordon, 1987).

Spirituality has been particularly neglected by investigators when conducting self-regulation research. Spirituality has been a difficult term to define, but has been defined as encompassing one's inner beliefs and values in relationship to a higher transcendent dimension (Burkhardt, 1989; Reed, 1987). Spirituality has also been explained as having both a horizontal and a vertical dimension. The horizontal dimension incorporates how an individual relates to self, others, and the environment based on personal values and beliefs. The vertical dimension incorporates how an individual relates to God or a higher transcendent being (Carson, 1989). Both spiritual dimensions influence an individual's perception of life events and have the potential to strongly influence behaviors and values (Carson, 1989). Therefore, understanding a client's spirituality may be important in order for the nurse to guide the client in the use of SRSs that are compatible with the client's value system. Additionally, spirituality may directly impact SRSs. Prayer, for example is a SRS, but prayer can also be an aspect of spirituality. The relationship between spirituality and an individual's use of SRSs has not been thoroughly explored. Therefore, the purpose of this research is to examine the relationship between spirituality and SRSs utilized by hospitalized adult oncology patients.

Significance

This study will provide preliminary data on the impact that spirituality has on a client's selection and use of SRSs. Health care providers who work with hospitalized adult oncology patients can use the findings to assist in planning self-regulation interventions compatible with the client's spirituality. However, spirituality is just one of the personal factors which influence behavior. A secondary benefit of this study will be to support the general importance of integrating client's personal factors into the planning phase of the nursing process for any patient population. SRSs have the capacity to decrease the severity of many patient problems, but if the strategy is not compatible with the client's personal factors, the client probably will not continue the intervention (Bulechek & McCloskey, 1985; Gordon, 1987). Needless to say, if the client does not continue the intervention, the success of the intervention in decreasing the client's problem is less likely.

Conceptual Framework

SRSs are derived from the self-regulation model of human behavior developed by Leventhal and colleagues (Leventhal & Cameron, 1972; Leventhal, Nerenz & Straus, 1982; Nerenz & Leventhal, 1983). The self-regulation model presents the individual as an active problem solver who objectively and subjectively deals with internal and environmental stimuli, and proposes that individuals engage

in SRSs to cope cognitively and emotionally with an illness
or health threat. Each cognitive and emotional response has
three distinct stages: (a) presentation or experience of the
illness, (b) action plan for coping with the illness, and (c)
appraisal of the plan. A diagram of the self-regulation
model is depicted in Figure 1.

                                PRESENTATION   ACTION PLAN   APPRAISAL
                                OF PROBLEM   FOR COPING
                                                  WITH PROBLEM

INTERNAL
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                                EMOTIONAL   ACTION PLAN   APPRAISAL
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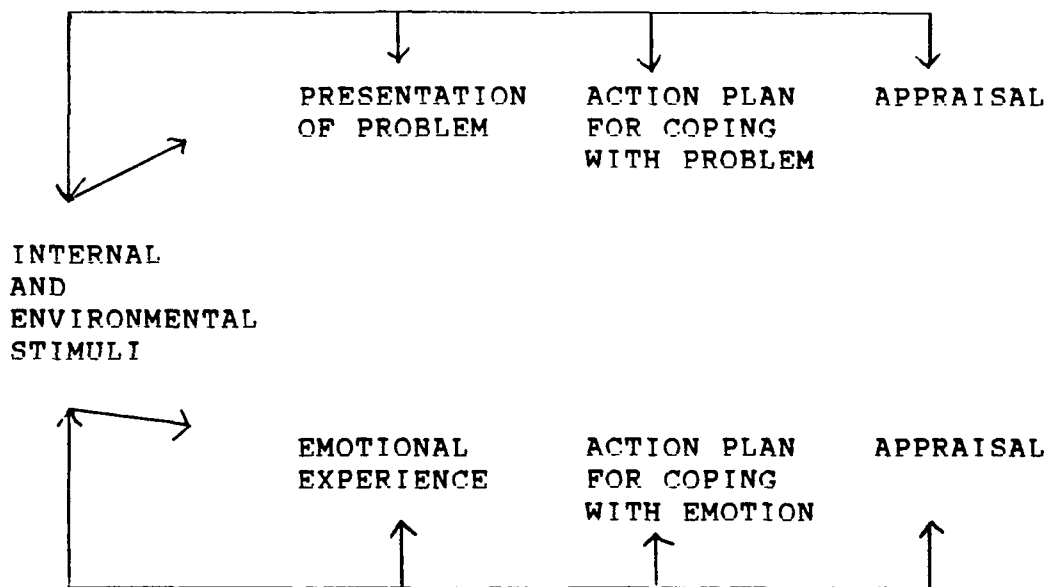
Figure 1.   Self-regulation model   (H. Leventhal, personal
communication, November 9, 1990

     In describing the model, the upper tier is the objective
and volitional portion of the model, while the lower tier is
the subjective and emotional portion of the model (Leventhal
et al, 1982). Each tier identifies three stages that
regulate adaptive behavior during an illness or health
threat. The upper tier includes the stages of:

     1. The cognitive representation of the problem which
includes identification of symptoms, possible diagnoses,
consequences of entering the health-care system, and
perceptions of how the health threat may change over time.

2. The action plan for coping with the problem. This stage is where individuals use SRSs to actively alter their health state.

3. Appraisal or evaluation of the action plan. Individuals evaluate the success of their coping strategies based on their own specific criteria. The plan may change based on this evaluation (Leventhal & Cameron, 1987). The lower tier stage is the subjective portion of the model; it also includes three stages:

1. The emotional experience of the health threat. Emotional reactions can occur during any objective phase.

2. From the emotional experience, an action plan for coping with the emotion is developed. The action plan for coping with emotion may or may not differ from the parallel action plan for coping with the problem. The processes involved in coping with emotions and coping with cognitive problems are interdependent. This interdependency may cause conflicts between the two stages of coping (Leventhal & Cameron, 1987). For example, a women who finds a lump on breast self-examination cognitively knows the lump may represent cancer. The appropriate action plan for this problem usually involves entering the health care system to evaluate the lump. However, her initial emotional coping response may be to deny the lump, therefore delaying the action plan of entering the health care system.

3. The appraisal stage of emotional coping is similar to the appraisal stage of problem coping. Individuals

evaluate their coping strategies, and may change their emotional coping strategy based on this evaluation (Leventhal & Cameron, 1987).

The model is based on hierarchial thinking (Leventhal et al, 1982). The first stage, presentation of the problem, is usually an abstract conceptual process which examines what the illness means to the individual. More concrete thoughts are generated as the individual moves into the action stage and develops a specific coping plan. The appraisal stage has the most concrete cognition in order to effectively evaluate the plan.

The model also has a time perspective which implies that the system will continue until the individual's goals are met. As the system continues it changes and becomes more complex because the individual is changing and becoming more complex (Leventhal et al, 1982). Also, the acuity or chronicity of an illness can influence the time perspective. An illness perceived as being acute will probably require less time in self-regulation than an illness which is perceived as being chronic (Leventhal et al, 1982).

Spirituality and the Self-Regulation Model

The self-regulation model explains how an individual copes objectively and emotionally to a health threat. Because spirituality influences one's behaviors, it is a variable that can impact the self-regulation model effecting how the individual copes objectively and emotionally with an illness. For example, most Christians believe that God is in

ultimate control and can provide relief from illness and suffering (Vanderpool, 1980). This belief may influence the way the Christian deals objectively and emotionally with the health threat. Also, spirituality may impact the model in an individual's choice of SRSs. Prayer is a spiritual based action plan which could be used for either objective or emotional coping.

Research Question

The research question to be investigated in this study is: What is the relationship between spirituality and the use of SRSs in hospitalized adult oncology patients?

Theoretical Definitions

Terms defined are self-regulation, self-regulation strategy, spirituality, and hospitalized adult oncology patient. Self-regulation is defined as an individual's voluntary attempt to alter his or her physiological and/or psychological health (Kogan & Betrus, 1984; Stoyva, 1977). A self-regulation strategy is any technique used by an individual to alter his or her physiological and/or psychological health. Spirituality is the personal values, behaviors, and beliefs that express an individual's relatedness to self, others, and the environment and/or to God or a transcendent dimension (Carson, 1989; Reed, 1987). The adult oncology patient is defined as an individual who is 25 years or older, and hospitalized with a primary medical diagnosis of cancer. Twenty-five was chosen as the initial

starting age because an individual's spirituality is usually solidified in young adulthood (Meadow & Kahoe, 1984).

Assumptions

The assumptions of this study were: (a) individuals can exert control over their health status through SRSs, and (b) individuals are aware of the SRSs they use and can identify them with the Carolina Self-Regulation Inventory-Revised (CSRI-R).

Limitations

The limitations of this study were two-fold. First, the CSRI-R measures only volitional SRSs at a moment in time, whereas, the self-regulation model is of a multivariate and transactional nature. Second, the Spiritual Perspective Scale (SPS) has had limited use with only one published research report (Reed, 1987).

CHAPTER II

Literature Review

The literature review focused on three aspects of research relevant to this study: (a) self-regulation strategies (SRSs) that health care professionals have taught adults with cancer, (b) SRSs that adults with cancer already practice, and (c) the relationship between spirituality and the use of SRSs. The purpose of this chapter was to examine the effectiveness of SRSs in decreasing the severity of cancer symptomatology, examine what SRSs adults with cancer already practice, and examine the influence of spirituality on SRSs.

SRSs that Researchers Have Taught Adults with Cancer

Research on SRSs that health care professionals have taught adults with cancer is extensive. Specific SRSs reviewed were progressive muscle relaxation (PMR), PMR with biofeedback, PMR with guided imagery, PMR with slow stroke back massage and guided imagery, massage, distraction, cognitive learning, aerobic exercise, and hypnosis (Barber, 1978; Burish et al, 1981; Carey & Burish, 1987; Dalton, 1987; Kaye, 1987; Lyles et al, 1982; Moore & Altmaier, 1981; Scott, Donahue, Mastrovito, & Hakes, 1986; Winningham & MacVicar, 1988). Specific symptoms reviewed were anxiety, nausea, vomiting, cachexia, pain, depression, and insomnia (Barber, 1978; Burish, Carey, Krozely, & Greco, 1987; Burish & Lyles, 1979; Cangello, 1961; Cannici, Malcolm, & Peek, 1983; Dixon, 1984; Kaye, 1987; Lyles et al, 1982; Scott et al 1986; Stam & Bultz, 1986).

Research using SRSs to try to decrease the severity of nausea and vomiting associated with chemotherapy has been extensive. Nausea and vomiting are the most frequently encountered side effects of chemotherapy, and have been regarded by some patients as worse than cancer itself (Burish et al, 1987; Cotanch, 1983). In a series of investigations, from case studies to quasi-experimental research designs, researchers studied the effectiveness of PMR with biofeedback, and PMR with guided imagery to decrease anxiety, nausea and vomiting associated with chemotherapy (Burish et al, 1981; Burish et al, 1987; Burish & Lyles, 1979; Carey & Burish, 1987; Lyles et al, 1982). Their findings demonstrated that the SRSs of PMR with biofeedback and PMR with guided imagery were effective for decreasing anxiety, nausea and vomiting associated with chemotherapy. However, not all of the studies yielded positive results with all of the variables. Carey and Burish (1987) conducted a quasi-experimental study with 45 patients randomly assigned to one of four groups: PMR and guided imagery taught by a professional, PMR and guided imagery taught by a paraprofessional, PMR and guided imagery taught by a cassette tape, and a control group. The group receiving professional instruction was significantly less anxious than the other groups, but no change was noted to occur in decreasing nausea for any of the groups.

Three studies by other researchers also yielded mixed results on the effectiveness of relaxation techniques for de-

creasing nausea and vomiting associated with chemotherapy (Cotanch, 1983; Cotanch & Strum, 1987; Scott et al, 1986). Scott et al (1986) conducted a quasi-experimental study in which the experimental group received combination slow stroke back massage, PMR, and guided imagery. The experimental group did not receive anti-emetics while the control group did receive an anti-emetic drug regime. The findings demonstrated that even though the total time of adverse effects was significantly reduced for the experimental group, the experimental group had significantly more nausea, vomiting and retching than the control group (Scott et al, 1986).

Two studies employed cognitive behavior techniques in their research designs to decrease the severity of cancer symptomatology (Dalton, 1987; Moore & Altmaier, 1981). The cognitive behavior techniques are different in each study as are the cancer symptoms targeted. Moore and Altmaier (1981) used stress inoculation training to decrease stress and anxiety in nine oncology patients. The researchers' technique included educating the patient about stress and anxiety, training the patient in different SRSs, and testing these SRSs in actual stressful conditions. Researchers claimed that stress inoculation did decrease patients' stress and anxiety, however, no statistical data were reported to substantiate these claims. Dalton (1987) conducted a quasi-experimental study in which the experimental group received information regarding pain in general, cancer pain, and three

SRSs to decrease pain. The SRSs were distraction, relaxation, and massage. The control group received general information regarding their disease. The researchers did not state how they controlled for the pain medication variable. Findings demonstrated that even though there was an increase in the SRSs used by the experimental group there was not a resulting decrease in pain. Dalton (1987), in explaining these findings, stated that pain is a very subjective experience and difficult to accurately measure. However, the researcher used three different scales to collect pain information, the Visual Analogue Scale, the McGill Pain Questionnaire, and a Pain Performing Activities of Daily Living Scale. Increasing the number of collection tools tends to increase the accuracy of results (Burns & Grove, 1987). Dalton (1987) did not investigate why subjects in the experimental group picked the one SRS they did. His research design, however, did lend itself for investigating why patients choose certain SRSs over other SRSs.

One study focused on the effects that aerobic exercise had on decreasing nausea (Winningham & MacVicar, 1988). This quasi-experimental study involved 42 women diagnosed with breast cancer. The experimental group received aerobic interval training, and reported a significant decrease in nausea over a pseudo-exercise group which received warm-up and cool-down exercises only, and over a control group which received no exercise.

Hypnosis has been used as a SRS in decreasing the severity of cancer symptomatology. Of the studies reviewed using adult patients, the most frequent symptom targeted was pain (Barber, 1978; Cangello, 1961; Kaye, 1987). However, Kaye (1987) also targeted nausea, vomiting, anxiety, depression, and anorexia. All the authors reported that hypnosis was an effective intervention for decreasing cancer symptomatology. Unfortunately, the researchers did not justify these claims with outcome data (Barber, 1978, Cangello, 1961; Kaye, 1987). Another drawback in evaluating the effectiveness of hypnosis was the lack of standardized hypnotic methods. Hypnotic strategies in these studies varied from study to study and within studies (Barber, 1978; Cangello, 1961; Kaye, 1987).

Two studies utilized SRSs to try to decrease insomnia in adults with cancer (Cannici et al 1983; Stam & Bultz, 1986). Stam and Bultz (1986) presented a case study of a male cancer patient who was taught a variation of PMR and guided imagery. The findings demonstrated significant results in decreasing the time of sleep onset and increasing the total amount of hours slept when compared to the patient's baseline data. However, in a quasi-experimental study by Cannici et al (1983) the SRS of PMR was only found to significantly decrease the time of sleep onset. No other differences, such as, duration of sleep, sleep satisfaction, and feeling rested after sleeping were reported as significant.

Dixon (1984) conducted a quasi-experimental study to test the effectiveness of increasing nutritional intake in cancer patients through the use of PMR with guided imagery and nutritional supplements. She randomly divided 88 cancer patients into four groups: nutritional supplement, PMR with guided imagery, nutritional supplement and PMR with guided imagery, and control. The variables were explicitly defined, and measurement strategies used to assess nutritional improvement were shown to be reliable and valid. The results demonstrated that the group taught PMR with guided imagery improved the most nutritionally while the control group decreased the most nutritionally. Interestingly, the group which received both nutritional supplements and PMR with guided imagery also showed a decrease in nutritional status. In explaining the results of this group, Dixon (1986) suggested that perhaps combining the interventions confused the subjects so that they could not perform the interventions as instructed.

Research on SRSs that health care professionals have taught adults with cancer has been extensive. Overall the findings supported the use of SRSs for decreasing cancer symptomatology, although not all studies yielded positive results. Researchers, when addressing results which were not significant, stated that instruments were not precise enough to measure changes, patients were confused over interventions, and pretreatment measures of side effects were too small to detect a change after the intervention (Carey &

Burish, 1987; Dalton, 1987; Dixon, 1986). Researchers did not address the possibility that the SRSs may have been incongruent with some of the patient's personal factors as a reason for insignificant results.

SRSs Already Used by Adults with Cancer

SRSs that adults with cancer already use to help them feel better has been studied in relation to chemotherapy, radiation therapy, pain, and nutritional intake (Dodd, 1982, 1984a, 1984b, 1984c, 1988; Rhodes et al 1988; Webster, 1988; Wilkie et al, 1988; Wilson, 1989; Wilson, Herman, Huang, & McIntire, 1990). Some researchers used Orem's self-care model as the conceptual framework for their studies (Dodd, 1982, 1984a, 1984b, 1984c, 1988; Rhodes et al, 1988). However, self-regulation theory would have been just as appropriate. For example, Dodd's research was designed to identify how patients recognized symptoms, judged the severity of symptoms, engaged in self-care activities, judged the effectiveness of self-care activities, and if self-care activities changed based on this judgement (1982, 1984a, 1984b, 1984c, 1988). Also, Dodd's definition of a self-care behavior was very similar to the definition of a SRS. Dodd stated that a self-care behavior was ". . . any activity initiated by the patient, friend, or family to alleviate a side effect." (1988, p. 9). Examples of self-care behaviors initiated by individuals to decrease nausea were taking anti-nausea medication, resting, drinking carbonated beverages, and eating crackers (Dodd, 1984b, 1984c, 1988). Conclusions

drawn from Dodd's research were: (a) self-care behaviors were not extensively utilized compared to side effects identified, (b) self-care behaviors that were utilized were popular and frequently portrayed in the media, and (c) patient's and physicians were identified as common sources for teaching self-care behaviors with nurses cited as being last in teaching patients self-care behaviors (1982, 1984a, 1984b, 1984c, 1988). Two possibilities were cited for individual's not engaging in self-care behaviors even though they were able to identify symptoms. First, some patients perceived that symptoms had to be endured as part of the treatment (Dodd, 1982; 1984b). Second, Rhodes et al (1988) found that if patients attributed a symptom directly to the illness or treatment they were more apt to engage in self-care behaviors than if the symptom was attributed to a different pathophysiological problem. Patients perceived that symptoms attributed to different pathophysiological problems should be treated by the health care team.

One researcher used the original Carolina Self-Regulation Inventory (CSRI), then titled the psychosomatic self-regulation inventory, to conduct research which assessed SRSs used by adults receiving outpatient chemotherapy (Webster, 1988). The instrument consisted of 60 statements describing self-regulation behaviors. Subjects were asked to indicate how frequently they used the behaviors by marking a five point Likert-type scale. Research findings indicated that subjects did utilize SRSs to alleviate side effects

associated with chemotherapy. The most utilized SRSs focused on internal behaviors such as visualization and positive self-talk. This study was the only study reviewed which evaluated personal factors in relationship to SRSs. Of the personal factors examined, only age and gender were found to be significant in choosing SRSs (Webster, 1988). Subjects over 63 years old used fewer SRSs which focused on comparing their progress to other's progress. No other age differences were significant. Women were found to use significantly more SRSs than men. On Webster's (1988) demographic data sheet, subjects were asked their religious preference and if religion was important in their everyday life. Unfortunately, these variables were not reported in the research findings.

One study focused on the SRSs patients initiated to decrease cancer pain (Wilkie et al, 1988). This study differed from others because patients completed questionnaires on self-care behaviors and were observed performing self-care behaviors (Wilkie et al, 1988). This methodology allowed investigators to compare what patients stated they did to decrease pain to what patients actually did to decrease pain. The findings validated what patients stated they did to decrease pain. Patient's validated 32% of positioning activities, 34% of distraction activities, 67% of pressure manipulative activities, 54% of immobilization and guarding activities, and 39% of analgesic activities (Wilkie et al, 1988).

Two studies focused on the SRSs adults with head and neck cancer used to improve their nutritional intake (Wilson, 1989, Wilson et al, 1990). The first study involved survivors of head and neck cancer. These subjects had no evidence of disease three years after diagnosis and treatment. The second study concentrated on subjects who had recently completed radiation therapy. Each study used open ended interviews to identify those SRSs used by individuals with head and neck cancer to improve their nutritional intake. Both studies had similar findings (Wilson, 1989; Wilson et at, 1990). SRSs identified were eating softer/liquid foods, taking responsibility for eating, having another person help with food preparation, having another person offer encouragement, and maintaining a sense of humor about eating.

Research on SRSs that adults with cancer already know and practice provides information on what SRSs are being used to alleviate cancer symptomatology and which strategies are effective. Nurses can use this information to assist them in planning interventions for their patients with cancer.

Only one study examined the relationship between personal factors and the use of SRSs (Webster, 1988). This relationship is an important link missing in the literature. Personal factors may be influencing patients' choices of SRSs. Understanding the relationship between personal factors and SRSs may help nurses plan more effective treatments. Specifically, spirituality has been overlooked

as a variable which could effect an individual's choice of SRSs.

The Relationship Between Spirituality and Self-Regulation

The importance of spirituality in the lives of adults with cancer has been documented (Gibbs & Achterberg-Lawlis, 1978; Reed, 1987; Spilka, Spangler, & Nelson, 1983). Prayer, an aspect of spirituality and a SRS has been reported as being important in coping with cancer (Spilka et al, 1983). However, only one study has explored the relationship between spirituality and the use of SRSs (Hearne, 1989). This study examined the relationship between spirituality, as defined by church affiliation and importance of religion, and the use of SRSs in 1340 well adults. Eight different denominations were identified with 198 people stating no denominational preference. SRSs which focused on imagery, positive thinking, and physical activity were used more by the Unitary/ Universal group than by the Jewish group. SRSs which focused on positive self-talk and prayer were used more by Unitary/Universal, Baptist, Presbyterian, Episcopal, Catholic, Lutheran, and Methodist groups than by the Jewish group or those who stated no religious preference (Hearne, 1989). Individuals who reported religion as very important were found to use more SRSs than individuals who reported religion as not important or somewhat important (Hearne, 1989).

Summary

The research findings for SRSs that health care providers have taught adults with cancer were generally favorable in decreasing cancer symptomatology. Not all studies, however, demonstrated statistical or clinical significance. Personal factors, such as spirituality, which may have influenced the effectiveness of the strategies were not addressed. In reviewing SRSs already utilized by adults with cancer, it was discovered that even though the adults were able to identify symptoms very few SRSs were initiated (Dodd, 1988). Two studies addressed the relationships between personal factors and the use of SRSs. Unfortunatley, Webster's (1988) study did not identify spirituality as one of the personal factors, and Hearne (1989) only defined spirituality by church affiliation and the importance of religion in an individual's life. Hearne's two-dimensional definition of spirituality did not explain why individuals used certain SRSs over other SRSs. Spirituality encompasses more than religious preference or importance of religion. Spirituality is a complex system of beliefs and values which can influence the behavior of individuals (Carson, 1989). Because spirituality can influence behaviors, it may help explain why individuals choose certain SRSs over other SRSs. The operational definition of spirituality in this research was designed to explore how spirituality impacts the behaviors of individuals. The research design was constructed to begin exploring the relationship between

spirituality and the use of SRSs. The researcher anticipates that the findings will influence oncology nurses to incorporate the patient's spirituality into their treatment planning of self-regulation interventions.

CHAPTER III

Methodology

Chapter three describes the methodology used in the study. A descriptive-correlational research design was used in order to gain information about the relationship between spirituality and the use of SRSs by hospitalized adult oncology patients. Specific items described in this section are sample, setting, instruments, ethical considerations, research procedure, and data analysis.

Sample

The sample was a convenience sample of 50 hospitalized adult oncology patients. Criteria for sample selection were that individuals be: (a) hospitalized with a primary diagnosis of cancer, (b) diagnosed with cancer for at least three months, (c) received at least one treatment modality, (d) at least 25 years old, (e) able to answer the research items verbally or in writing, and (f) oriented to time, place, and person.

Criterion one was selected to obtain adults with a wide variety of cancers and treatments. Criteria two and three were selected in order for the individual to have had sufficient time to develop SRSs specific to cancer and its treatment. Criterion four was selected because it is in young adulthood that individuals solidify their concept of spirituality (Meadow & Kahoe, 1984). The last two criteria ensure that individuals are competent to answer the items. Subjects will be excluded if they have neurological deficits

which impact on their ability to answer the study items. However, potential subjects with central nervous system cancers will be able to participate in the study assuming they meet inclusion criteria.

Setting

Potential subjects were obtained from two private, religious affiliated hospitals located within five miles of each other. Both hospitals admitted male and female, insured and non-insured oncology patients to a specific unit in the facility. Patients with all types of cancers and treatments had the potential for being admitted. The difference between the two hospitals was that hospital A had a bed capacity of 478 and admitted more oncology patients than hospital B which had a bed capacity of 239. Also, hospital A had a cancer institute affiliation which hospital B did not have.

Instruments

Carolina Self-Regulation Inventory-Revised

The Carolina Self-Regulation Inventory-Revised (CSRI-R) operationally defines SRSs already used by individuals in altered states of health. It was developed by Massey and Pesut (1986, in press). The CSRI-R has been revised from its initial form of 60 items and 6 subscales to 31 items and 9 subscales. The 31 items are declarative statements representing self-regulating behaviors and self-regulating thoughts (Appendix D). The subscales represent different groups of behaviors and thoughts. The estimated time to complete the CSRI-R is 10 minutes.

Subjects were asked to choose, based on a Likert-type scale, the SRSs they used to help them feel better or get better during their hospitalization for cancer or its treatment. The possible choices for each statement and the number given to each choice were: 1 = not at all, 2 = seldom, 3 = sometimes, 4 = often, and 5 = frequently. The nine subscales of the CSRI-R and their definitions were:

1. Appraisal: Items which compare one's self to others or to a standard of recovery. An example of an appraisal item is, "It helps to compare my situation to others with similar problems."

2. External: Items which focus attention outside one's self. An example of an external item is, "Prayer helps me feel better."

3. Power: Items which reflect a belief in one's personal power. An example of a power item is, "I use my mental power to heal myself."

4. Health Care Provider (HCP): Items which focus on HCPs or nurses' and physicians' influence. An example of a HCP item is," Doctors and nurses understand my problems better than I do."

5. Active: Items which reflect active exercise and doing things for one's self. An example of an active item is, "It helps to walk."

6. Passive: Items which reflect passive activities and not doing for one's self. An example of a passive item is, "It helps to rest in bed."

7. Future: Items which focus on a future time orientation. An example of a future item is, "I see myself in the future when I will be better."

8. Present: Items which focus on the present time. An example of a present item is," I remind myself to think only of positive things."

9. Imagination: Items which focus on the power and use of one's imagination. An example of an imagination item is, "I imagine myself someplace else that is more pleasant." (Massey & Pesut, in press).

The CSRI-R was scored by summing across all items and summing individual subscales. The total range of possible scores was from 31 to 155. A higher score indicated that more SRSs were used. The range of subscale scores vary depending on the number of questions in each subscale. Each subscale has three, four, or five items for possible scores of 3 to 15, 4 to 20, and 5 to 25. A high subscale score indicated that a particular type of self-regulating behavior was used more frequently.

The CSRI-R has been tested on four different groups: (a) university employees, (b) adults with cancer, (c) university students, and (d) women who successfully managed their weight (Massey & Pesut, in press). Measures of internal consistency for the CSRI-R with these groups were between 0.842 and 0.898 (Massey & Pesut, in press). The total Cronbach's alpha on the adults with cancer sample was

0.884 with the Cronbach alpha's for each subscale being:

appraisal = 0.878, external = 0.465, power = 0.65,

HCP = 0.225, active = 0.811, passive = 0.729, future = 0.729,

present = 0.710, and imagination = 0.631 (Massey & Pesut, in

press).

Content validity of the original CSRI was determined

by having three university nursing faculty members familiar

with self-regulation classify 93 statements into six

categories (Massey & Pesut, 1986). This procedure produced a

60 item CSRI with 59 items receiving 100 percent rater

agreement. The current 31 item CSRI-R is a refinement of the

CSRI based on further testing and analysis (Massey & Pesut,

in press).

Spirituality Perspective Scale

The Spirituality Perspective Scale (SPS) operationally

defines spirituality. The SPS measures an individual's

perception of his or her own spirituality (Appendix E). The

SPS was developed by Reed to determine the importance of

spirituality in terminally ill cancer patients (1987). Reed

derived her scale from King and Hunt's (1975) 61 item

Dimensions of Religiosity scale. The SPS is especially

suited for cancer patients because it is brief without

sacrificing important content and incorporates a broader view

of transcendence that tends to be excluded in most scales

that are labeled religious (P. Reed, personal communication,

November 6, 1990). For example, spirituality does not

necessarily include participation in organized religion which

is often a factor in religious scales. Cancer patients may not be able to participate in organized religion due to their illness. However, not participating in organized religion does not mean cancer patients are less spiritual.

The SPS consists of 10 short statements which reflect an individual's personal views and specific behaviors in relationship to God or a higher transcendent being (Reed, 1986; Reed, 1987). Subjects were asked to choose, on a six point Likert-type scale, items which reflected their personal views and behaviors regarding spirituality. An example of a statement is, "My spirituality is a significant part of my life." The SPS also included a self-regulating statement regarding prayer which read, "How often do you engage in private prayer." The estimated time to complete the questionnaire is five minutes.

The statements were scored on a Likert-type scale of one through six. Four of the statements had frequency related responses. The number and responses were: 1 = not at all, 2 = less than once a year, 3 = about once a year, 4 = about once a month, 5 = about once a week, and 6 = about once a day. Six of the statements had agreement related responses. The number and responses were: 1 = strongly disagree, 2 = disagree, 3 = disagree more than agree, 4 = agree more than disagree, 5 = agree, and 6 = strongly agree. The SPS was scored by summing the responses across items for a possible range of scores from 10 to 60. A higher score indicated a higher degree of spirituality.

The concept of how spirituality influences one's daily behavior is critical to this research in order to explore the relationship between spirituality and the use of SRSs. However, the SPS does not contain a statement specific to spirituality influencing daily behavior. Therefore, one item was added which read, "My spirituality is important to me because it influences my daily behaviors." This item was answered with the previously described six point Likert-type scale for agreement. Also, the additional statement was scored and evaluated both separately and together with the 10 item SPS. With the added statement, the total SPS score ranged from 11 to 66.

The internal consistency of the SPS, without the additional item, is equal to or greater than 0.93 when being tested on adults with terminal cancer or healthy adults (Reed, 1987). The adults with terminal cancer received a Cronbach's alpha of 0.95 (Reed, 1987). Evidence for validity has been reported by Reed in that women and lower socioeconomic groups tended to score higher on the SPS as these groups usually do on similar scales. Also, individuals who had no religious background scored significantly lower on the SPS than individuals who state a religious background (Reed, 1986; Reed, 1987; Reed, personal communication November 6, 1990).

Demographic Data

Subjects were also asked to complete a demographic data sheet (Appendix B). Demographic data were obtained from

the subject and hospital record. Each item was analyzed to determine if a relationship existed between the demographic variables and the CSRI-R and the SPS. Information on the demographic data sheet included: (a) age, (b) gender, (c) marital status. (d) educational level, (e) occupation, (f) religious affiliation, (g) church affiliation, (h) type of cancer, (i) length of time subject has known about the cancer, (j) treatments received for the cancer, and (k) reason for hospitalization. The subject's educational level and occupation were used to obtain the Hollingshead two factor index of social position (Miller, 1977). The Hollingshead variable gives both an overall score between 11 and 77 and a class score. There are five class scores: class one for scores between 11 and 17, class two for scores between 18 and 31, class three for scores between 32 and 47, class four for scores between 48 and 63, and class five for scores between 64 and 77. A lower scores indicates a higher social position. Subjects' class scores were used to determine differences between spirituality and SRSs.

Ethics

Informed consent was obtained from each subject (Appendix A). The informed consent addressed the following items: (a) purpose of the study; (b) length of time required to participate; (c) selection criteria; (d) what subjects will be required to do in the study; (e) potential risks to subjects and how risks will be minimized; (f) possible benefits derived from the study; (g) method of maintaining

confidentiality; (h) name, address, and phone number of researcher; (i) offer to answer questions regarding research; (j) statement regarding compensation for participating in study; and (k) right to withdraw from study at any time without fear of coercion or punishment

Confidentiality was maintained by not using subjects' name or identifying numbers. The demographic data sheet and instruments had preassigned codes in order to match items together for the purpose of data analysis. The codes were not traceable to the subjects because the codes were random numbers assigned to items for data analysis only.

Procedure

Approval to conduct the study (Appendix C) was obtained from the researcher's university through the college of nursing, each hospital, and the physicians of the potential subjects. The study was conducted at two different hospitals, but the procedure at each hospital was the same:

1. A list of potential subjects was obtained from the unit ward clerk at the beginning of each hospital visit.

2. The nursing cardexes of potential subjects were reviewed for selection criteria.

3. Potential subjects meeting selection criteria were contacted in their rooms and asked to participate in the study.

4. Informed consent was obtained from each subject. A copy of the consent was given to each subject. The original consent was placed in a folder.

5. Privacy was maintained during the study by interviewing subjects in their rooms. All subjects had private rooms.

6. The purpose and directions for completing each part of the study were verbally stated by the researcher and written at the beginning of each section.

7. Depending on the subject's preference, the researcher either read each item to the subject and recorded the subject's responses, or gave the three sections to the subject for him or her to complete.

8. The researcher did not explain items or discuss responses with subjects until after the subjects had completed the study.

9. The researcher stayed with the subjects during the study. The researcher then collected each section and placed them in a different folder than the consent forms.

10. After data collection the researcher answered any questions the subjects had. If the subjects experienced emotional distress as a result of answering any items appropriate counseling and/or referral was offered.

Data Analysis

The demographic variables were analyzed using descriptive statistics. To determine the influence of the demographic variables on CSRI-R scores and SPS scores, t-tests and analysis of variance (ANOVA) statistical analysis will be used. The research question will be analyzed using Pearson Product-Moment Correlation technique.

Chapter IV

Results

Chapter IV presents the results of the analysis. The chapter is divided into three sections. The first section describes the characteristics of the sample. The second section includes results of the statistical analysis between variables including the research question. The third section summarizes the results.

Characteristics of the Sample

The sample consisted of 50 hospitalized adult oncology patients. Forty-six (92 percent) subjects came from hospital A, and four (8 percent) came from hospital B. Eight potential subjects refused to participate. Six out of the eight volunteered reasons for not participating. Three subjects stated they did not feel well enough to participate. Two subjects did not want to discuss their spirituality and one subject did not want to sign the informed consent. Demographic data were collected to describe the sample and to determine if there were relationships between selected demographic variables and spirituality or between selected demographic variables and the use of SRSs.

The age of subjects in the sample ranged from 35-85. The mean age of the sample was 63.6 years with a standard deviation of 11.17 years. Of the 50 subjects, 24 were male and 26 were female. The males represented 48 percent of the sample while the females accounted for 52 percent of the sample.

Five categories were used to identify marital status of the subjects: single, married, divorced, separated, and widowed. Most of the subjects (29) were married (58 percent). The next most frequently occurring category was widowed (22 percent). The least frequently occurring category was single (4 percent). Table 1 displays the frequency and percent of the marital status of the sample.

Table 1

Frequency and Percent of Marital Status Categories in the Sample.

Status	Frequency	Percent
Married	29	58.0
Widowed	11	22.0
Divorced	4	8.0
Separated	4	8.0
Single	2	4.0

Table 2 displays the frequency of the educational level
of the overall sample. The majority of the subjects (38
percent) had completed seventh through eleventh grade, while
20 percent had completed high schorl.

Table 2

Frequency and Percent of Educational Level Categories in the
Sample.

Level	Frequency	Percent
Graduate Profession	2	4.0
College Graduate	5	10.0
Partial College	9	18.0
High School Graduate	10	20.0
Seventh through Eleventh Grade	19	38.0
Less than Seventh Grade	5	10.0

The 50 subjects were divided into six occupational categories. Subjects reported their previous occupation if they were retired or presently not working. The five categories were: professional, housewife, blue collar, clerk/technical, manager, and farmer. Table 3 presents the frequency and percent of occupational categories of the sample.

Table 3

Frequency and Percent of Occupational Categories in the Sample

Occupation	Frequency	Percent
Professional	9	18.0
Housewife	5	10.0
Blue Collar	17	34.0
Clerk/technical	12	24.0
Manager	5	10.0
Farmer	2	4.0

Social status was calculated using the Hollingshead two-factor index of social position (Miller, 1977). Calculations are based on both educational level and occupational position. Scores can range from 11 to 77 with lower scores indicating a higher social position than higher scores. There are five classes that correspond to the scores: class I (scores 11-17), class II (scores 18-31), class III (scores 32-47), class IV (scores 48-63) and class V (scores 64-77). For example, class I could indicate a person with a graduate education with a higher executive or major professional occupation. Class V could indicate a person with less than a twelfth grade education who worked as an unskilled laborer. Most of the subjects were classified as V (30 percent). Table 4 depicts the social status of the subjects.

Table 4

Frequency and Percent of Social Position Categories in the Sample

Class	Frequency	Percent
I	2	4.0
II	7	14.0
III	13	26.0
IV	13	26.0
V	15	30.0

Table 5 presents the frequency and percent of the subjects by religious preference. Eight religious categories were stated: Baptist, Methodist, Episcopalian, Lutheran, Pentecostal/Holiness, Catholic, Presbyterian, and Other. Over half of the subjects stated Baptist as their religious preference (59.6 percent). The two religious preferences in the other category were African Methodist-Episcopalian and Mormon. Three subjects stated no religious preference. Also, 44 (88 percent) subjects reported yes to local church membership while six (12 percent) reported no local church membership.

Table 5

Frequency and Percent of Religious Preference Categories in the Sample.

Preference	Frequency	Percent
Baptist	28	59.6
Methodist	4	8.5
Episcopalian	2	4.3
Lutheran	3	6.4
Pentecostal/Holiness	3	6.4
Catholic	2	4.3
Presbyterian	3	6.4
Other	2	4.3
None	3	6.4

Table 6 provides frequency and percent information about the subjects' cancer. Eight categories were identified: lung, breast, colon/rectum, prostate, blood related (leukemia and lymphoma), skin, gynecologically related, and other. Lung cancer was the most common type of malignancy reported. Thirteen of the 50 subjects (26 percent) were diagnosed with lung cancer.

Table 6

Frequency and Percent of Types of Cancer in the Sample

Cancer	Frequency	Percent
Lung	13	26.0
Breast	8	16.0
Colon/Rectal	9	18.0
Prostate	4	8.0
Blood Based	7	14.0
Skin	2	4.0
Gynecological	1	2.0
Other	6	12.0

The length of diagnosis for the subjects ranged from three months to 288 months (24.0 years). The mean length of diagnosis was 3.59 years with a standard deviation of 5.48 years.

Subjects had received a variety of treatments for their cancer diagnoses. The categories were: chemotherapy only; radiation therapy only; surgery only; chemotherapy and radiation; all three modalities; radiation and surgery; and chemotherapy and surgery. The most frequent treatment reported was the combination of chemotherapy and radiation therapy (26 percent). The least reported treatment was radiation therapy with only two subjects (4 percent) having received radiation therapy for their disease. Table 7 provides information on the type of treatment or treatments subjects have received for their cancer.

Table 7

Frequency and Percent of Treatments Subjects have Received

Treatment(s)	Frequency	Percent
Chemotherapy	5	10.0
Radiation Therapy	2	4.0
Surgery	3	6.0
Chemotherapy and Radiation	13	26.0
All Three Treatments	12	24.0
Radiation and Surgery	6	12.0
Chemotherapy and Surgery	9	18.0

Subjects reported a wide variety of reasons for their present hospitalization. There responses were divided into five categories: chemotherapy treatments, radiation therapy treatments, both chemotherapy and radiation treatments, work-up for metastasis of disease, and complications secondary to treatment or disease. The majority of subjects, 27, were hospitalized for some type of complication associated with treatment or disease. Examples of complications stated were neutropenia secondary to chemotherapy, infection, pain control, dehydration, and cellulitis. Table 8 provides information related to the reason for hospitalization.

Table 8

Frequency and Percent of Reasons for Hospitalization in the Sample

Reason for Hospitalization	Frequency	Percent
Chemotherapy	14	28.0
Radiation Therapy	4	8.0
Chemotherapy and Radiation Therapy	1	2.0
Work-up for Metastasis	4	8.0
Complications	27	54.0

Findings of Statistical Analysis

This section presents data analysis pertinent to spirituality and self-regulation. The demographic variables are analyzed in relation to spirituality and self-regulation. The research question, "What is the relationship between spirituality and self-regulation strategies used by hospitalized adult oncology patients," is answered. The data were analyzed with descriptive statistics, t-tests, ANOVA, and Pearson Product-Moment Correlation Coefficient.

Spirituality and Self-Regulation

The Spirituality Perspective Scale (SPS) developed by Reed (1987) contained 10 items for a total possible score of 60. This researcher added an additional item which addressed spirituality impacting daily behaviors. This additional statement then made the total possible score for the SPS 66. Overall, subjects scored high on the SPS which indicated that subjects reported a high degree of spirituality. Table 9 presents measurements of central tendency for the original and amended SPS.

Table 9

Measurements of Central Tendency for the Subjects' Original and Amended Spirituality Scores

Spirituality Perspective Scale	Means	Standard Deviation	Range
Original SPS	55.44	5.01	39-60
Amended SPS	61.04	5.43	43-66

The additional item on the amended SPS did not threaten the reliability of the tool. Reed reported a Cronbach's alpha of .95 when first conducting her research with the SPS (1987). Measures of internal consistency were analyzed for this research on both the original SPS and the amended SPS. The original SPS Cronbach's alpha was 0.81 and the amended SPS Cronbach's alpha was 0.83. Because the amended SPS did maintain the tool's reliability, the remaining spiritual analyses will be reported using the 11 item SPS.

The Carolina Self-Regulation Inventory-Revised (CSRI-R) scale has a total possible score of 155. Mean scores were determined for each of the nine subscales of the CSRI-R as well as a total mean score for the instrument. It was possible to determine the most used strategies by dividing each mean subscale score by the total points possible for that subscale. For example the mean subscale score for appraisal was 16.18. There are five appraisal items for a total possible score of 25, therefore, 16.18 divided by 25 is .647. Using this method, health care provider was the most frequently used self-regulation strategy followed by the external SRS. Power was the least used SRS. The total mean score for the CSRI-R was 111.56. Table 10 presents measurements of central tendency for the sample's total and subscale scores on the CSRI-R.

Table 10

Measurements of Central Tendency for the Subjects' Total and

Subscale Scores on the CSRI-R.

Self-Regulation Subscales	Mean	Adjusted Mean	Standard Deviation	Range of Scores
Appraisal	16.18	.647	4.81	5-25
External	15.98	.799	2.56	8-20
Power	11.50	.575	3.13	4-19
HCP	12.84	.856	1.78	9-15
Active	10.94	.729	2.80	5-15
Passive	11.68	.778	2.50	6-15
Future	11.74	.783	2.83	4-15
Present	11.20	.747	2.60	4-15
Imagination	9.50	.633	3.09	3-15
Total CSRI-R	111.56	.720	15.83	70-143

Demographic Data, Spirituality, and Self-Regulation

Next, the relationships between the demographic variables and spirituality and the demographic variables and SRSs were explored. The demographic variables analyzed were age, gender, marital status, educational level, socioeconomic status, religious preference, cancer diagnosis, cancer treatments, and reason for hospitalization. ANOVAs compared the use of SRSs and spirituality with age, socioeconomic status, marital status, cancer diagnosis, cancer treatments, and reason for hospitalization. Tables 11 through 16 present the significant results of the analyses. T-tests were used to analyze gender, educational level, and religious preference. Table 17 presents the significant results of these analyses.

Table 11

ANOVA Table for Active Self-Regulation Category by Age

Source	df	Sum of Squares	Mean Squares	F Value	p
Model	2	55.14	27.57	3.93	0.03*
Error	47	329.68	7.01		
Total	49	384.82			

*p< 0.05

Table 12

ANOVA Table for Future Self-Regulation Category by Age

Source	df	Sum of Squares	Mean Squares	F Value	p
Model	2	51.58	25.79	3.56	0.04*
Error	47	340.04	7.23		
Total	49	391.62			

*p< 0.05

Table 13

ANOVA Table for Total Score on CSRI-R by Marital Status

Source	df	Sum of Squares	Mean Squares	F Value	p
Model	4	2321.33	580.33	2.62	0.05*
Error	45	9958.99	221.31		
Total	49	12280.32			

*p< 0.05

Table 14

ANOVA Table for Power Self-Regulation Category by Marital Status

Source	df	Sum of Squares	Mean Squares	F Value	p
Model	4	94.37	23.59	2.75	0.04*
Error	45	386.13	8.58		
Total	49	480.50			

*p< 0.05

Table 15

ANOVA Table for Passive Self-Regulation Category by Cancer

Treatment

Source	df	Sum of Squares	Mean Squares	F Value	p
Model	6	95.42	15.90	3.23	0.01*
Error	43	211.46	4.91		
Total	49	306.88			

*p< 0.05

Table 16

ANOVA Table for Present Self-Regulation Category by Reason

for Hospitalization

Source	df	Sum of Squares	Mean Squares	F Value	p
Model	4	60.57	15.14	2.53	0.05*
Error	45	269.43	5.99		
Total	49	330.00			

*p< 0.05

Table 17

<u>T-tests for CSRI-R Subscales by Gender</u>

CSRI-R	N	Mean	Standard Deviation	T	p
Appraisal					
Female	26	15.85	4.92		
Male	24	16.54	4.77	-0.5065	0.6148
External					
Female	26	15.92	2.48		
Male	24	16.04	2.69	-0.1621	0.8719
Power					
Female	26	11.31	2.91		
Male	24	11.71	3.41	-0.4483	0.6560
HCP					
Female	26	13.00	1.65		
Male	24	12.67	1.93	0.6589	0.5131
Active					
Female	26	9.92	2.94		
Male	24	12.04	2.22	-2.8596	0.0063*
Passive					
Female	26	11.81	2.71		
Male	24	11.54	2.30	0.3722	0.7114
Future					
Female	26	11.85	3.15		
Male	24	11.63	2.50	0.2737	0.7855
Present					
Female	26	11.50	2.77		
Male	24	10.88	2.40	0.8484	0.4004
Imagination					
Female	26	9.35	3.42		
Male	24	9.67	2.75	-0.3637	0.7177

p* < 0.05

The age of the subjects was divided into three categories: category 1 included subjects 49 or younger, category 2 included subjects 49 through 63, and category three included subjects greater than 63. ANOVAs were run on the SPS and CSRI-R scores by age group. The only statistically significant differences between age categories were in the active and future subscales. Subjects younger than 49 (n=6) used the active strategy significantly more (p =.03) than subjects in the other two categories. Also, the younger subjects used the future category significantly more (p = .04) than subjects over 63. However, even though this analysis was statistically significant there were only six subjects in the younger age group which may have skewed the results.

Socioeconomic status was divided into five classes as determined by scores on Hollingshead's two factor index of social position. ANOVAs were run on the SPS and CSRI-R scores by socioeconomic status with no significant difference found between classes on any of the scales.

Five categories were used to identify the marital status of the subjects: single, married, divorced, separated, and widowed. ANOVAs were run on the SPS and CSRI-R by marital status. Divorced individuals had significantly higher (p = .05) total scores on the CSRI-R than individuals who were widowed. The ANOVA also showed a significant difference in the power subscale (p = .04) by marital status. However,

Tukey's post hoc analysis failed to show where the differences occurred for the power subscale.

Eight categories were used to identify cancer diagnosis: lung, breast, colon/rectal, prostate, blood related, skin, gynecological related, and other. ANOVAs were run on the SPS and CSRI-R scores by cancer diagnosis with no significant results found.

There were seven categories for cancer treatments: chemotherapy; radiation therapy; surgery; chemotherapy and radiation; all three modalities; radiation and surgery; and chemotherapy and surgery. ANOVAs were run on the SPS and CSRI-R scores by cancer treatment and the only significant difference between treatment categories was in the passive subscale. Subjects who had received both radiation and surgery treatments used the passive strategy significantly less (p= .01) than subjects who received other treatments. However, there were only two subjects who received radiation therapy and both subjects scored high (mean =14) on the passive subscale. These two subjects may have skewed the results indicating a significant difference in the passive subscale when in reality there was no difference.

There were five reasons for hospitalization: chemotherapy, radiation therapy, chemotherapy and radiation therapy, work-up, and complications. ANOVAs were run on the SPS and CSRI-R scores by reason for hospitalization. The only significant difference between categories was on the passive subscale. Subjects who were hospitalized for a work-

up (n=4) used the passive strategy significantly less (p = .05) than individuals who were hospitalized for radiation therapy (n =4). Because both groups only had four subjects each, the results are probably not clinically significant.

T-tests were run on the SPS and CSRI-R scores by gender. Significant statistical differences were found between the two groups on the active subscale (p = .0063). The males used the active strategy more than the females.

Religion was divided into two groups: Baptist and other. The researcher divided the groups into Baptist and other to obtain a greater equality among groups. Baptist was the most frequently cited category (59.6%) with the remaining categories being cited infrequently. T-tests were run on the SPS and CSRI-R scores by religious preference. No significant results were obtained.

The educational level was also divided into two groups. Group one were those subjects who had a high school education or higher and group 2 were those subjects who had less than a high school education. This division of educational levels provided a more equal distribution between the levels. T-tests were run on the SPS and CSRI-R scores by education level. No significant results were obtained.

Research Question

The research question asked, "What is the relationship between spirituality and self-regulation strategies used by hospitalized adult oncology patients?" This question was answered using the Pearson Product-Moment Correlation

Coefficient. There appears to be a moderate to strong correlation (r= .51) between spirituality and self-regulation. This research used a relatively small sample size making the correlation of .51 more impressive than if a larger sample size had been employed. Table 18 presents the results of this analysis.

Table 18

Pearson Product-Moment Correlation Coefficient Between Spirituality and Self-Regulation Subscales and Total.

Self-Regulation Subscales	Correlation with SPS	p
Appraisal	0.34	.0068*
External	0.32	.0234*
Power	0.25	.0834
HCP	0.12	.2690
Active	0.12	.3149
Passive	0.12	.2487
Future	0.39	.0049*
Present	0.54	.0001*
Imagination	0.33	.0211*
Total CSRI-R	0.51	.0002*

*p <0.05

Not reflected on the above table is the r square which accounts for twenty-five percent of the variance between spirituality and self-regulation.

Summary

This research explored the personal factors which may impact a cancer patient's selection of volitional self-regulation strategies. Spirituality was especially targeted as a personal factor which may influence the selection and use of SRSs by hospitalized adult oncology patients. A descriptive-correlational study design was used to explore the relationship between demographic variables and spirituality and demographic variables and self-regulation. Also, the relationship between spirituality and self-regulation was analyzed. Fifty subjects participated in the study by completing a demographic data sheet, the SPS, and the CSRI-R.

The sample revealed a diverse group of subjects with different diagnoses and treatments. The mean age of the sample was 63.6 years with over half of the subjects stating Baptist as their religious preference. Analysis of the responses to the SPS and CSRI-R revealed that the subjects were spiritual and did use SRSs. Subjects scored high on both the original and amended SPS (mean of 55.44 and 61.04 respectively). The total mean score on the CSRI-R was 111.56 or 72 percent of the total possible score. Further analysis did show some statistically significant differences between various subscale scores on the CSRI-R by demographic variables. However, most of these differences may be attributed to the small number of subjects within a particular category. Pearson Product-Moment Correlation

Coefficient answered the research question. A solid positive correlation occurred which suggests that individuals who score high on the SPS use more SRSs than individuals who scored lower on the SPS.

Chapter V

Conclusions

This chapter presents a summary of the research process, interprets the findings of the data analyses, and discusses the findings in relationship to the self-regulation model. In addition, findings not directly related to the research question, suggestions for nursing practice, and implications for further research will be stated.

The purpose of this study was to examine the relationship between spirituality and self-regulation strategies used by hospitalized adult oncology patients. Spirituality has been neglected by researchers who conduct self-regulation research. It was thought that because spirituality has the ability to impact behaviors (Carson, 1989), it might be an important variable to consider when planning self-regulation treatments for clients.

Researchers have used the SRSs of relaxation, guided imagery, stress inoculation, hypnosis, biofeedback, distraction, and aerobic exercise to decrease the severity of side effects associated with cancer and its treatment. However, not all of the research findings yielded significant results. Researchers have also studied volitional SRSs that oncology clients use to decrease cancer symptomatology. Dodd (1982, 1984a, 1984b, 1984c, 1988) has pioneered studying SRSs oncology clients already know and practice. Dodd's findings demonstrated that clients did practice SRSs to decrease cancer symptomatology. Unfortunately, Dodd also found that

SRSs were not utilized to the extent that symptoms were identified, and those SRSs that were utilized were popular and frequently portrayed in the media.

Only one study reported the relationship between spirituality and self-regulation (Hearne, 1989). Hearne defined spirituality in terms of religious preference and importance with no conclusions made to the possible correlation between spirituality and self-regulation (1989).

This research was designed to identify the relationship between spirituality with self-regulation. Fifty hospitalized adults with cancer participated by completing three tools: demographic data, SPS, CSRI-R. Research findings demonstrated no significant differences between the demographic variables and spirituality. Significant results between the demographic variables and CSRI-R will be discussed later. A fairly strong positive correlation (0.51) between spirituality and the use of SRSs supported the supposition that spirituality would impact on the use of SRSs used by hospitalized adult oncology patients.

Discussion of Findings

Spirituality

There were no significant differences between the demographic variables and spirituality. Other studies have demonstrated that older individuals and women tend to score higher on spirituality measurements than younger individuals and men (Blazer & Palmore, 1976; Reed, 1986, 1987). The subjects in this sample demonstrated a high degree of

spirituality (mean 61.04) as operationalized by the SPS. Therefore, significant differences between the demographic variables and spirituality may not have been apparent. However, this research did support the precept that individuals diagnosed with cancer tend to have a higher degree of spirituality than individuals not diagnosed with cancer (Gibbs & Achterberg-Lawlis, 1978; Reed, 1986, 1987).

Self-Regulation Strategies

The internal consistency of the CSRI-R was analyzed for a total reliability score of 0.82. Table 19 presents the Cronbach's alpha scores for the self-regulation subscales and total.

Table 19

Cronbach's Alpha for Self-Regulation Subscales and Total

Self-Regulation Subscales	Cronbach's Alpha
Appraisal	0.71
External	0.33
Power	0.43
HCP	0.60
Active	0.54
Passive	0.61
Future	0.76
Present	0.45
Imagination	0.47
Total CSRI-R	0.82

Subjects in this sample had a total mean self-regulation score of 111.56 out of a total possible score of 155. The most commonly used SRS was HCP which suggests that hospitalized cancer patients rely heavily on doctors and nurses to help them feel better. This explanation may also contribute to why power was the least utilized SRSs. Power involves using ones personal power to heal oneself. Hospitalized cancer patients may subjugate themselves to the HCP thereby decreasing their own personal power. Also, the constant health demands on the individual with a chronic illness may result in feelings of powerlessness (Soeken & Carson, 1987).

Seven statistically significant findings occurred between the demographic variables and the CSRI-R. Subjects 49 years and younger used active SRSs more than the other age categories, and future SRSs more than subjects over 63. However, there were only six subjects in the 49 and younger age category which may have skewed the results. T-tests revealed that males used more active SRSs than females. However, it is not known why this result occurred.

A small sample size may have contributed to the statistically significant findings which arose between treatments and SRSs. Subjects who received both radiation and surgery treatments used passive SRSs less than subjects who had other types of treatments. Two subjects in the radiation only treatment category scored very high on the passive subscale which may have skewed the results of the radiation

and surgery treatment category. There was also a statistically significant finding between reason for hospitalization and self-regulation. Subjects who were hospitalized for a work-up of their disease used less passive SRSs than subjects who were hospitalized for radiation therapy. Unfortunately, there were only four subjects in each of these categories which may have accounted for the results.

One statistically significant finding between the demographic variables and self-regulation also appeared to be clinically relevant. Findings demonstrated that divorced individuals used more total SRSs than individuals who were widowed. There may be a difference in the way that divorced individuals view health and treatment which differs from the widowed person. For example, a widowed person may be depressed over losing his or her mate, and therefore use less SRSs than the divorced individual. This finding merits further investigation into the differences that marital status has on self-regulation. Research findings also revealed a difference in the power subscale by marital status but post hoc analysis failed to detect where the difference occurred.

Research Question

Pearson Product-Moment Correlation Coefficient did support a relationship between an individual's spirituality and his or her use of SRSs. Research findings demonstrated that individuals who are more spiritual use more SRSs than

individuals who are less spiritual. This finding also indirectly supports the belief that spirituality impacts the self-regulation model.

Self-Regulation Model

This research used the conceptual model of self-regulation as a framework for guiding the study (Leventhal et al, 1982). The research was not designed to test the model, however, subjects' discussion of their use of SRSs did lend support for the model. Subjects performed volitional SRSs to decrease symptoms and evaluated the effectiveness of these strategies. The researcher did not notice any interactions between the cognitive and emotional tiers of the self-regulation model which may have been due to limitations in the CSRI-R tool. Additional findings gleaned from the research also lent support for the self-regulation model.

Additional Findings

One question on the CSRI-R, "I learn more ways to help myself feel better," supports the concepts in the self-regulation model. Some subjects discussed ways they had learned to help themselves feel better based on their symptoms. However, some subjects did not understand the question implying that these subjects were not aware of all of the SRSs they used.

Another finding which became apparent was that 20 subjects attributed healing in two out of the three power statements to God. These statements read: "I use my mental power to heal myself," and "People say you have the power to

heal yourself." For example, one person stated that, "God has the power to heal, not me." Also, many subjects mentioned that they asked God to heal them. This additional finding provides another reason for power, as a personal strategy, being the least used subscale. Although some subjects did answer "frequently" on the power items after qualifying that it was the God's power and not their own power that healed them.

Some subjects who participated in the study were in the terminal stages of their disease. It appeared that these subjects used less SRSs than individuals who were not in terminal stages. Perhaps dying individuals are less able to self-regulate or may not view self-regulation as an important part of their life than individuals who are not at the end stage of their disease.

The final additional finding occurred by chance. The first subject interviewed did not meet the inclusion criteria for length of diagnosis. The subject had been diagnosed with lymphoma for one month. However, for practice, the researcher continued the interview and collected the data. The completed interview was kept, but not used in data analysis. Coincidentally, the last subject interviewed also happened to be the first subject interviewed, but now he met all of the inclusion criteria. Both of his SPS scores and CSRI-R scores changed. The SPS score only increased slightly from the first to the second interview (64 to 66). However, the CSRI-R increased dramatically from the first to the

second interview (117 to 138). The subject performed more SRSs after being diagnosed four months than when first diagnosed. The subject used more appraisal and external subscales than he had previously. This finding also supports the self-regulation model in that individuals use more SRSs as time continues.

Implications for Nursing Practice

Based on both the research findings and additional findings implications for practice can be stated. First, power as a SRS was not readily used by this sample. The power variable suggests not only a healing power but also a control over health status. The concept of control has been suggested as an important variable in coping with disease (Christman, 1990; Syme, 1991). Spirituality has also been linked to power. Soeken & Carson (1987) stated that individuals who experience a loss of power no longer feel empowered by God. HCPs can assist patients in obtaining a sense of power over their health status. For example, persons who believe in the spiritual power of God can be encouraged to pray. Also, HCPs can support SRSs already used by patients. Some subjects were not aware of the SRSs they performed to help themselves feel better. HCPs can assess what SRSs the patients perform and encourage them to continue using these strategies, thereby allowing patients power over their own health status.

This research supports the spiritual component in patient assessment prior to planning interventions.

Spirituality is an important variable in the lives of most cancer patients as evidenced by this research and the research of others (Gibbs & Achterberg-Lawlis, 1978; Reed, 1986, 1987). Spirituality does appear to influence the use of SRSs as evidenced by the positive correlation between the two variables. However, further research is needed.

Implications for Further Research

Based on the results of this study the following are recommendations for further study:

1. A longitudinal study which examines the changes in SRSs exhibited by individuals in different stages of disease.

2. Replicating this study using a more diverse sample to include individuals with both acute and chronic diseases to further test the relationship between spirituality and the use of SRSs.

3. Research is needed to explore the benefits of teaching SRSs to individuals based on the SRSs used by other individuals with the same disease process.

Summary

This research explored the relationship between spirituality and SRSs used by hospitalized adult oncology patients. It was thought that spirituality may impact an individual's selection and use of SRSs because spirituality can effect an individual's behavior (Carson, 1989). The research findings demonstrated a significant correlation between spirituality and the SRSs used by hospitalized adult oncology patients. However, except for one analysis, the

demographic variables studied did not yield clinically
significant results between an individual's spirituality or
use of SRSs. The one exception was that widowed individuals
used less SRSs than divorced individuals.

Power was the least used self-regulation subscale.
However, it was also the most commented upon subscale in the
study. Twenty subjects directly attributed healing power to
God and not themselves. However, whether or not individuals
attribute healing power to God or not, they can be encouraged
to use the power strategy. For example, HCPs can encourage
individuals who believe in God's healing power to pray.
Also, HCPs can teach clients that self-regulation in itself
can be a form of power over disease. HCPs can first teach
patients to recognize the symptoms and side effects of their
disease and treatment. Next, HCP can teach patients to
perform SRSs which decrease these symptoms and side effects,
thereby giving the patient some power over the disease.
Further research is needed to explore the full potential that
self-regulation strategies have in assisting individuals to
help themselves feel better.

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APPENDIX A

Informed Consent Form

Appendix A

INFORMED CONSENT FORM

Study Title: The Relationship Between Spirituality and the Use of Self-Regulation Strategies of Hospitalized Adult Oncology Patients.

You are being asked to be in a research study conducted by a University of South Carolina graduate nursing student. The purpose of this study is to see how spirituality affects the things you do to make yourself feel better. You were asked to be in the study because you have cancer and are in the hospital. About 50 other people are also being asked to be in the study. Being in the study may not help you, but may help nurses plan better treatments for patients with cancer.

If you agree to be in the study you will be asked to complete three forms. The first form asks about you. The second form asks about things you do to help yourself feel better. The third form asks about your spirituality. It takes about 20 minutes to complete the forms. If you wish, I will read the statements for you and record your responses. The only risk to being in this study is becoming tired. If that happens tell me and we can finish later.

Being in this study will not cost you any money. Your doctor knows you may be asked to be the study and has given permission. I may need to look at your medical record in regards to the form that asks about you. Your being in this study is voluntary and you can drop out at any time without it affecting your medical or nursing care at _____.

Information gained from this study will be used in the form of averages. No individual person's name will be made available to anyone except me. Your name will never be placed on the forms either in written or coded forms. The code numbers at the top of the forms are to keep your forms together.

My name, address, and telephone number are: Cassandra Salvatore 3517 Baywater Dr Columbia, SC 29209 (803) 776-7955. Please call me if you have any questions about the study.

"I understand my being in this study is voluntary and I can drop out at any time. I have been given a written description of the procedure and my questions have been answered. I understand the information gathered in this study will remain confidential. I understand that my signature indicates my willingness to participate in the study."

Date	Your Signature	Signature of Researcher

APPENDIX B

Demographic Data Sheet

Appendix B

Code _____   DEMOGRAPHIC DATA SHEET

1. Age _____

2. Sex   Male _____
            Female _____

3. Are you   1. Single _____
              2. Married _____
              3. Divorced _____
              4. Separated _____

4. Highest level of education completed:

   1. Graduate Profession _____
   2. College Graduate _____
   3. Partial College   _____
   4. High School Graduate _____
   5. Completed seventh through eleventh grade _____
   6. Less than seventh grade _____

5. Occupation _____

6. What is your religious preference _____

7. Are you a member of a local church?   Yes _____   No _____

8. If yes to question seven, please name the church _____

9. Type of cancer presently being treated _____

10. Length of diagnosis _____

11. Check the treatments you have received for your cancer

    1. Chemotherapy _____
    2. Radiation therapy _____
    3. Surgery _____
    4. Other _____   (please specify if other) _____

12. Reason for your present hospitalization _____

APPENDIX C

Clearance to Conduct Study

Appendix C

UNIVERSITY OF SOUTH CAROLINA
COLLEGE OF NURSING
GRADUATE PROGRAM

CLEARANCE TO CONDUCT STUDY

Name of Student__Cassandra R. Salvatore_____

Address _____Telephone__ _____

Graduate Major__Medical/Surgical Nursing_____

Title of Proposed Study__The relationship between spirituality and the use
of self-regulation strategies by hospitalized adult oncology patients

Abstract of Proposed Study

Cooperating Agency/ies: I_Providence_____ II_Baptist Medical Center
    Dates (tentative): __January 21, 1991 through March 15, 1991__
    Hours: _10:00 am through 6:00 pm_____

Approvals:

    Committee Chairperson _Jolene Herman_____ _19 Dec 90_
                          NAME   DATE
    Dean, College of Nursing _Mauh Parson_____ _Feb. 18, 91_
                            NAME   DATE
    Nurse Administrator, Agency I_Phila Cox An m_____ _Jan 30, 1991_
                          NAME   DATE
              Agency II_Jeanne U. Castalaugh_____ _2/12/91_
                          NAME   DATE

Place original in Appendix of Thesis or Project. Provide signed
copies to:
        1. Office of the Associate Dean for Academic Affairs
        2. Each agency
        3. Office of the Dean of the College of Nursing

    The University of South Carolina and the cooperating agency/ies
are equal opportunity employment agencies.

Form #50 G.P.
Revised 3/88

ABSTRACT FOR CLEARANCE TO CONDUCT STUDY

The purpose of this descriptive-correlational study is to examine the relationship between spirituality and the use of self-regulation strategies (SRSs) by hospitalized adult oncology patients. SRSs are any behaviors that individuals perform to make themselves feel better. SRSs have been studied in relationship to decreasing the severity of cancer symptoms and its treatment. Researchers do not know why some studies yield insignificant results or why individuals choose certain SRSs over other SRSs. Spirituality has been suggested as a variable which may impact both the effectiveness of SRSs and the choice of SRSs. A self-regulation model provides the theoretical framework for this study. A convenience sample of 100 hospitalized adults with cancer will be asked to complete two instruments and a demographic data sheet. Both the Carolina Self-Regulation Inventory-Revised and the Spirituality Perspective Scale have adequate reliability and validity. Results will be analyzed with descriptive statistics, t-tests, analysis of variance, and Pearson product-moment correlation coefficient. Nurses who work with hospitalized adult oncology patients can use the results to increase the effectiveness of their treatment planning with SRSs.

ABSTRACT D

Carolina Self-Regulation Inventory-Revised

Code——————— CAROLINA SELF-REGULATION INVENTORY-REVISED

<u>Directions:</u>   Listed below are several ways that people use or have
used to help themselves feel or get better when they are recovering
from an illness. Read each item and circle that response that best
describes how often you do this when you are recovering from an illness
or want to help yourself feel better.

		not at all	seldom	some- times	often	frequently
1.	I talk with people who have had similar conditions and compare their recovery with mine.	1	2	3	4	5
2.	Physical closeness to a loving partner helps me feel better.	1	2	3	4	5
3.	I use my mental power to heal myself.	1	2	3	4	5
4.	I remind myself to think only of positive things.	1	2	3	4	5
5.	It helps to compare my situation to others with similar problems.	1	2	3	4	5
6.	I get ideas about how tc help my recovery by listening to others talk about their recovery experience.	1	2	3	4	5
7.	I tell myself about the things that I know are good for me.	1	2	3	4	5
8.	I have an active imagination and I use it to my advantage.	1	2	3	4	5
9.	Doctors and nurses understand my problems better than I do.	1	2	3	4	5
10.	I ask other people what they do to feel better and use what they say.	1	2	3	4	5

		not at all	seldom	some-times	often	frequently
11.	I compare how I am doing with what others tell me about my condition.	1	2	3	4	5
12.	I see myself in the future when I will be better.	1	2	3	4	5
13.	It helps to walk.	1	2	3	4	5
14.	Playing cards or games helps me feel better.	1	2	3	4	5
15.	Visits from my family help me feel better.	1	2	3	4	5
16.	I tell myself about the future when I will be better.	1	2	3	4	5
17.	I visualize myself well and in good condition.	1	2	3	4	5
18.	I tell myself that I am not ill, and I need to start feeling better.	1	2	3	4	5
19.	It helps to rest in bed.	1	2	3	4	5
20.	I imagine myself someplace else that is more pleasant.	1	2	3	4	5
21.	Sitting or laying down helps me feel better.	1	2	3	4	5
22.	It helps to exercise.	1	2	3	4	5
23.	Doctors and nurses can help me feel or get better in specific ways.	1	2	3	4	5

	not at all	seldom	some-times	often	frequently
24. Taking hot showers or baths helps me feel better.	1	2	3	4	5
25. Medicines are an important part of feeling better.	1	2	3	4	5
26. People say you have the power to heal yourself.	1	2	3	4	5
27. Self-hypnosis is useful to my recovery.	1	2	3	4	5
28. It helps to daydream.	1	2	3	4	5
29. I believe you need to exercise your body regularly to maintain your health.	1	2	3	4	5
30. I learn more ways to help myself feel better.	1	2	3	4	5
31. Prayer helps me feel better.	1	2	3	4	5

ABSTRACT E

Spirituality Perspective Scale

SPIRITUAL PERSPECTIVE SCALE

Code _____

INTRODUCTION Spirituality has different meanings for people. In general, it is defined as personal values and behaviors in relationship to God or a Higher Being. I am interested in your views on the questions. There are no right or wrong answers, of course.

DIRECTIONS In answering the following questions about your spiritual views, think about what spirituality means to you personally. Circle the number that best describes you.

	Not at all	Less than once a year	About once a year	About once a month	About once a week	About once a day
1. In talking with your family or friends, how often do you mention spiritual matters.	1	2	3	4	5	6
2. How often do you share with others the problems and joys of living according to your spiritual beliefs?	1	2	3	4	5	6
3. How often do you read spiritually-related material?	1	2	3	4	5	6
4. How often do you engage in private prayer?	1	2	3	4	5	6

Code_____
Directions: Please indicate the degree to which you agree or disagree
with the following statements. Circle the number that best describes you.

	Strongly disagree	Disagree	Disagree more than agree	Agree more than disagree	Agree	Strongly agree
5. Seeking forgiveness is an important part of my spirituality.	1	2	3	4	5	6
6. I seek spiritual guidance in making decisions in my everyday life.	1	2	3	4	5	6
7. My spirituality is a significant part of my life.	1	2	3	4	5	6
8. I frequently feel very close to God or a "higher power" in prayer, during public worship, or at important moments in my daily life.	1	2	3	4	5	6
9. My spiritual views have had an influence upon my life.	1	2	3	4	5	6
10. My spirituality is especially important to me because it answers many questions about the meaning of life.	1	2	3	4	5	6
11. My spirituality is important to me because it influences my daily behaviors.	1	2	3	4	5	6